Triple trouble in the heart

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CARDIOVASCULAR FLASHLIGHT

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Triple trouble in the heart

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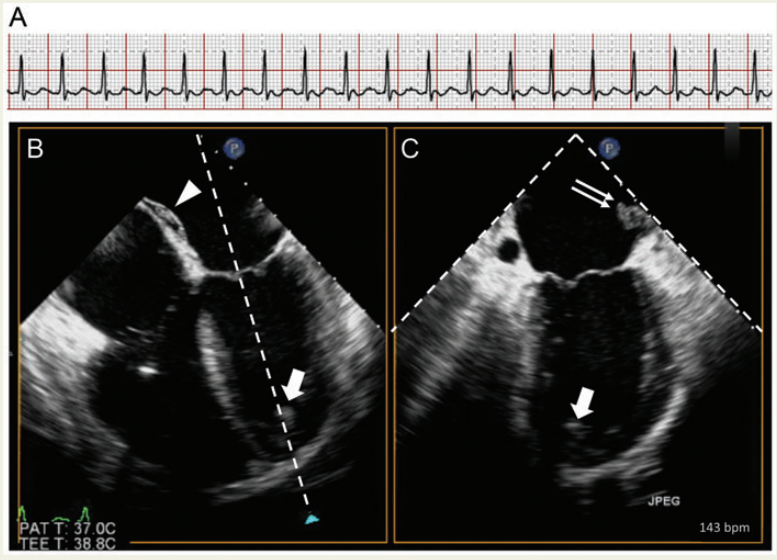
A 47-year-old man with a history of systemic hypertension and type 2 diabetes mellitus was admitted to our centre in cardiogenic shock. He experienced rapidly progressive shortness of breath for the past 3 weeks. The ECG on admission showed atrial flutter with 2:1 conduction and a ventricular rate of 142 b.p.m. (*Panel A*). Transoesophageal echocardiography prior to cardioversion (*Panels B* and *C*, simultaneous recordings of the left heart in two orthogonal planes) revealed a dilated left ventricle with an ejection fraction of 25%. In addition, large clots were detected in the three most typical locations for clot formation in the left heart: in the left atrial appendage [*Panel C* (double arrow) and see Supplementary material online, *Video S1*], in the left ventricular apex [*Panels B* and *C* (arrow) and see Supplementary material online, *Video S1*] and in the tunnel of the foramen ovale [*Panel B* (arrow head) and see Supplementary material online, *Video S2*]. Under antithrombotic treatment with heparin the clots were nearly completely resolved within 2 weeks (see Supplementary material online, *Video S3*). After restoration of sinus rhythm the left ventricular ejection fraction improved to 40% (see Supplementary material online, *Video S3*). The patient recovered without clinical or radiological evidence of systemic embolization. He will be kept on long-term anticoagulant therapy and was instructed to seek immediate medical attention in case of recurrence of palpitations or worsening exercise tolerance. Given the need for life-long anticoagulation, no thrombophilia screening was performed. Amiodarone was initiated as an antiarrhythmic therapy.



(*Panel A*) ECG on admission demonstrating atrial flutter with 2:1 conduction and a ventricular rate of 142 b.p.m. (*Panels B* and *C*) Transoesophageal echocardiography showing the presence of clots in the tunnel of the foramen ovale (arrow head), the left ventricular apex (arrow), and the left atrial appendage (double arrow).

Supplementary material is available at *European Heart Journal* online.